

WEST Search History

DATE: Wednesday, March 15, 2006

<u>Hide?</u>	<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>
<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>			
<input type="checkbox"/>	L22	l21 and ('h.sub.2so.sub.4' or 'h.sub.2 so.sub.4')	1
<input type="checkbox"/>	L21	6039815.pn.	2
<input type="checkbox"/>	L20	ppm and L19	0
<input type="checkbox"/>	L19	dss and ('h.sub.2so.sub.4' or 'h.sub.2 so.sub.4') and brush	40
<input type="checkbox"/>	L18	markoff and ('h.sub.2so.sub.4' or 'h.sub.2 so.sub.4') and brush	1
<input type="checkbox"/>	L17	markoff and ('h.sub.2so.sub.4' or 'h.sub.2so.sub.4') and brush	0
<input type="checkbox"/>	L16	markoff and sulfuric and brush	6
<input type="checkbox"/>	L15	markoff and L14	4
<input type="checkbox"/>	L14	L13 and wafer and sulfuric	1083
<input type="checkbox"/>	L13	brush or scrub\$5	399692
<input type="checkbox"/>	L12	L11 and wafer	22
<input type="checkbox"/>	L11	(sulfuric with ppm) and (ultraso\$5 or megaso\$5)	101
<input type="checkbox"/>	L10	l7 and (ultraso\$5 or megaso\$5)	6
<input type="checkbox"/>	L9	5780363 and (ultraso\$5 or megaso\$5)	1
<input type="checkbox"/>	L8	5780363.pn.	2
<input type="checkbox"/>	L7	134/\$.ccls. and (diluted near sulfuric)	24
<input type="checkbox"/>	L6	134/\$.ccls. and (diluted same sulfuric)	194
<input type="checkbox"/>	L5	134/\$.ccls. and (diluted same spm)	9
<i>DB=EPAB; PLUR=YES; OP=ADJ</i>			
<input type="checkbox"/>	L4	WO-2002100993-A1.did.	0
<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>			
<input type="checkbox"/>	L3	2002wo-ep05964	2
<input type="checkbox"/>	L2	us10740371	0
<input type="checkbox"/>	L1	10740371	0

END OF SEARCH HISTORY

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<input type="checkbox"/>	L20	ppm and L19	0
<input type="checkbox"/>	L19	dss and ('h.sub.2so.sub.4' or 'h.sub.2 so.sub.4') and brush	40
<input type="checkbox"/>	L18	markoff and ('h.sub.2so.sub.4' or 'h.sub.2 so.sub.4') and brush	1
<input type="checkbox"/>	L17	markoff and ('h.sub.2so.sub.4' or 'h.sub.2so.sub.4') and brush	0
<input type="checkbox"/>	L16	markoff and sulfuric and brush	6
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<input type="checkbox"/>	L12	L11 and wafer	22
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<input type="checkbox"/>	L4	WO-2002100993-A1.did.	0
<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>			
<input type="checkbox"/>	L3	2002wo-ep05964	2
<input type="checkbox"/>	L2	us10740371	0
<input type="checkbox"/>	L1	10740371	0

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L7: Entry 3 of 24

File: PGPB

Feb 26, 2004

DOCUMENT-IDENTIFIER: US 20040035448 A1

TITLE: Selective treatment of microelectronic workpiece surfaces

Current US Classification, US Primary Class/Subclass:134/33Detail Description Paragraph:

[0156] Use of a diluted sulfuric acid and peroxide solution, including approximately 10 parts H.sub.2SO.sub.4 to thirty parts H.sub.2O.sub.2 in deionized water, for an etchant exposure of approximately 30 seconds, results in removal of copper films of less than approximately 1.5 microns and achieves a back side clean of less than or equal to 5-10 copper atoms/cm.sup.2. FIG. 30 provides a scanning electron microscope photo of the exclusion zone formed on the front side of a wafer treated in accordance with this process, yielding a clean etch exclusion zone (as well as clean bevel edge and back side (not shown)), and a distinct demarcation between the exclusion zone and the substantially unaffected copper film on the remainder of the front side.

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L12: Entry 22 of 22

File: DWPI

Jan 29, 2004

DERWENT-ACC-NO: 2004-195699

DERWENT-WEEK: 200568

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TITLE: Cleaning method of contaminated material using carbonated water, involves spraying heated and pressurized carbonated water with specific carbonic acid concentration on contaminated material

PATENT-ASSIGNEE:

ASSIGNEE	CODE
BTA KK	BTABN
OKAZAKI T	OKAZI

PRIORITY-DATA: 2002JP-0170662 (May 9, 2002)

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PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<input type="checkbox"/> JP 2004024926 A	January 29, 2004		015	B08B003/10

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP2004024926A	May 20, 2002	2002JP-0180617	

INT-CL (IPC): [A23 B 7/153](#); [A23 L 3/358](#); [A23 L 3/3589](#); [A61 H 23/00](#); [A61 L 2/18](#);
[B05 B 1/18](#); [B05 B 1/30](#); [B05 B 3/02](#); [B05 B 7/04](#); [B05 B 7/16](#); [B05 B 17/06](#);
[B05 D 1/02](#); [B05 D 3/10](#); [B08 B 3/02](#); [B08 B 3/08](#); [B08 B 3/10](#); [B08 B 3/12](#)

ABSTRACTED-PUB-NO: JP2004024926A

BASIC-ABSTRACT:

NOVELTY - The contaminated material is cleaned by using pressurized carbonated water having a carbonic acid concentration of 300-6000 ppm. The carbonated water produced by mixing of pressurized carbon dioxide gas and/or air with wash water, is heated to 25-46 deg. C and then sprayed on the contaminated materials.

DETAILED DESCRIPTION - A control mechanism resists the pressure of carbon dioxide gas supplied into a tank (28), and allows supply of water into tank, when pressure of gas is more than atmospheric pressure. The wash water is oscillated at a frequency of 1-3 MHz, using an ultrasonic vibrator. The concentration of ozone in wash water, is 0.1-15 ppm. The distance between the contaminated material and ultrasonic vibrator, is 2 cm. The concentration of hypochlorite or hydrochloric acid of 30-500 ppm, chlorine-dioxide salt 20-1000 ppm, free chlorine of 1-500 ppm,

sulfuric acid, acetic acid or citric acid, in wash water with pH of 5-9, is 1-1000 ppm.

An INDEPENDENT CLAIM is also included for washing apparatus.

USE - For use in foodstuff processing facility and electronic industry, to wash contaminated material e.g. foodstuffs, electronic base, various equipment, medical instruments, pipe lines, vegetables and wafer of integrated circuit.

ADVANTAGE - Improves washing efficiency and enables to obtain washed wafers with fine printing quality.

DESCRIPTION OF DRAWING(S) - The figure shows a front view of the washing apparatus.

washing apparatus 1

pipe 20

cylinder mechanism 24,25

conveyor 27

tank 28

CHOSEN-DRAWING: Dwg.1/8

TITLE-TERMS: CLEAN METHOD CONTAMINATE MATERIAL CARBONATED WATER SPRAY HEAT
PRESSURISED CARBONATED WATER SPECIFIC CARBONIC ACID CONCENTRATE CONTAMINATE
MATERIAL

DERWENT-CLASS: D13 D22 E34 E36 P33 P34 P42 P43 S05 U11 V04 V06 X25

CPI-CODES: D03-A; D03-H02E; D03-J; E11-Q01; E31-N05C; E31-N05D;

EPI-CODES: S05-X; U11-C06A1B; V04-R03C; V04-X01D; V06-B03; V06-D; X25-H09A;

CHEMICAL-CODES:

Chemical Indexing M3 *01*
Fragmentation Code
K0 L4 L472 M280 M320 M416 M424 M620 M740 M781
M904 M905 Q224 Q261 R023
Specific Compounds
13387K 13387R 13387U

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C2005-199328

Non-CPI Secondary Accession Numbers: N2005-540289

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L7: Entry 8 of 24

File: USPT

Sep 9, 2003

DOCUMENT-IDENTIFIER: US 6615854 B1

TITLE: Wafer cleaning apparatus

Detailed Description Text (6):

Cleaning solution "a" sprayed from the cleaning nozzle 31 should be a liquid substance that does not etch copper and is effective in removing metal and particulate contamination. For example, any one of pure water, diluted sulfuric acid, diluted hydrofluoric acid (DHF), ionized water, 2-stage processing with dilute hydrofluoric acid and ozonized water, and 2-stage processing with hydrogen peroxide (H.sub.2 F.sub.2) and diluted hydrofluoric acid may be used as necessary.

Detailed Description Text (8):

Cleaning solution "b" sprayed from the cleaning nozzle 33, should be capable of removing Cu adhered on a silicon wafer when compared to the solution "a", which is sprayed on the front or fabricated surface of the wafer. The cleaning solution "b" may use, for example, any one of pure water, diluted sulfuric acid, diluted hydrofluoric acid, 2-stage processing with ozonized water and diluted hydrofluoric acid, and 2-stage processing with hydrogen peroxide and diluted hydrofluoric acid, as necessary.

Current US Original Classification (1):134/148Current US Cross Reference Classification (1):134/153Current US Cross Reference Classification (2):134/902[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)